

# Education and the Environment Initiative

Assembly Bill 1548  
(Pavley, Chapter 665, Statutes of 2003)

## Educator Needs Assessment

## Executive Summary

In January 2005, the California Environmental Protection Agency and the Integrated Waste Management Board commissioned The Acorn Group and State Education and Environment Roundtable to conduct an educator needs assessment as part of the Education and the Environment Initiative (EEI) [Assembly Bill 1548 Pavley, Chapter 665, Statutes of 2003]. Among other mandates, the Law calls for development of a Model Curriculum designed to achieve standards-based education goals in the State's K-12 classrooms.

The EEI planning team developed this Educator Needs Assessment (ENA) to gather information about teachers' interests, constraints and perceived needs. The ENA was intended to guide the design of the Model Curriculum so that it would better meet the needs of classroom teachers.

As such, the ENA was used to help identify:

- current patterns of use of adopted and supplementary materials in science and history/social science;
- preferred formats for the design and delivery of curriculum materials;
- criteria that influence actual use of curriculum materials by educators; and,
- preferred methods of delivery for professional development.

Surveys were sent to a total of 9,657 K-12 educators and administrators currently active in California public schools. The list of educators who received surveys represented a random sample from the California State Teachers' Retirement System database. A total of 361 surveys were completed and returned, resulting in a response rate of 3.74 percent.

The typical respondent was a classroom teacher with 15 years of teaching experience and an average class size of 25.5 students. Respondents represented a fairly even distribution of the core disciplines of English/language arts, science, mathematics, and history/social science.

Respondents were asked to identify design characteristics for the Model Curriculum that would best meet their needs. The results of the ENA indicated that educators:

- prioritize curricular materials targeted at grades 4 – 6 (reinforcing recommendations based on review of the EEI standards alignment maps);
- are most strongly interested in the development of materials for the teaching of science, followed by history/social science and English/language arts (ENA data do not support the development of materials that focus on mathematics);
- prefer printed rather than web-based curricular materials, (including lesson plans, student handouts, and student readings);
- require curricular materials to address grade- and discipline-specific content standards;
- need the curricular materials to be made available to them at no cost.

Respondents were asked to rank seven criteria that might influence the likelihood that the Model Curriculum would be used by teachers. The results indicate that teachers are most likely to use materials that:

- require little preparation time;
- are easy to use; and,
- emphasize hands-on instruction.

In general, respondents indicate fairly strong interest in the development of the Model Curriculum, providing that specific needs and constraints are addressed. To achieve success with the Model Curriculum, the EEI planning team should continue to solicit input from teachers and administrators and seek their involvement as the Model Curriculum is developed.

## **Introduction**

In January 2005, the California Environmental Protection Agency and the Integrated Waste Management Board commissioned The Acorn Group and State Education and Environment Roundtable to conduct an educator needs assessment as part of the work of AB 1548 [Pavley, Chapter 665, Statutes of 2003] – the Education and the Environment Initiative (EEI). Using the database of the State Teachers' Retirement System, 9,657 surveys were mailed to K-12 educators and administrators currently active in California public schools.

## **Problem Statement and Research Purpose**

The EEI planning committee has made a concerted effort to solicit input from educators and administrators during development of the work called for in the legislation. Online discussions, field review sessions, focus groups, and this educator needs assessment have provided numerous opportunities for members of California's teaching community to comment on the draft documents and voice any issues, needs, and concerns. Educators have been asked to provide input on all elements of the EEI including:

- definition of the environmental principles and concepts (EP&C);
- alignment of the EP&C to California's content standards in science and history/social science; and now,
- development of the design for the Model Curriculum.

This Educator Needs Assessment (ENA) was designed to provide information related to design and potential use of the Model Curriculum, a set of K–12 materials intended to achieve standards-based education goals using the EP&C as the context for learning. The purpose of the ENA was to help identify:

- current patterns of use of adopted and supplementary materials in science and history/social science;
- preferred formats for the design and delivery of curriculum materials;
- criteria that influence actual use of curriculum materials; and,
- preferred methods of delivery for professional development.

## **Methods**

A written survey instrument was developed to gather the necessary information from California educators. This instrument was designed as a single-piece mailing consisting of the survey on one side, and cover letter and postage-paid reply form on the other (see Appendix A).

The study population was derived from the State Teachers' Retirement System database. An initial random sort of 50,000 names was created from the list of actively contributing members in the 2003-2004 database. Once this list was zip code sorted, every fifth name was selected. Accounting for 343 erroneous addresses, a net of 9,657 surveys were mailed out in early February 2005.

A total of 361 surveys were completed and returned from the net mailing of 9,657 surveys, a response rate of 3.74%. This response rate allows reporting of survey results with at a confidence level of 95% with a confidence interval of +/- 5.06% for the entire study population.

The survey instrument consisted of 26 questions. These questions were subdivided as follows:

- current status of teaching, name and location of school, subjects taught, and number of students in the classroom — seven questions
- selection and actual use of adopted and supplementary materials for teaching science and history/social science — ten questions
- preferred format and features offered in curriculum materials, preferred grade-group levels and subject areas to address, likelihood of use of a Model Curriculum, and criteria that influence one's actual use of material — five questions
- delivery aspects of professional development to help school district staff integrate the Model Curriculum into district plans — four questions

## Results and Findings

The typical respondent in this study were characterized as follows:

- classroom teachers (88.1%)
- other educators, e.g., administrators (11.9%)
- 15 year average of teaching experience
- class size of average of 25.5 students
- discipline coverage was as follows (totals exceed 100% because many teachers cover more than one subject area):
  - 62.6% English/language arts
  - 61.8% science
  - 58.7% mathematics
  - 56.0% history/social science
  - 37.7% other

Respondents provided a wide representation of rural, urban, and suburban regions of the state. Not surprisingly, the greatest frequency of response came from respondents in cities representing the Bay Area (24), as well as Los Angeles (13), Sacramento (10), and San Diego (9). Names and locations of the schools where the respondents work are provided in Appendix C.

Grade level(s) taught are summarized below. Respondents were allowed to select more than one grade level, resulting in a percentage total that exceeds 100% and higher representation at the secondary level where one teacher often teaches at multiple grade levels.

**Table 1 — Grade level(s) taught**

<b>Preschool</b>	1.1%	<b>6<sup>th</sup></b>	13.9%
<b>Kindergarten</b>	10.0%	<b>7<sup>th</sup></b>	11.6%
<b>1<sup>st</sup></b>	14.4%	<b>8<sup>th</sup></b>	10.8%
<b>2<sup>nd</sup></b>	14.4%	<b>9<sup>th</sup></b>	20.5%
<b>3<sup>rd</sup></b>	13.6%	<b>10<sup>th</sup></b>	21.3%
<b>4<sup>th</sup></b>	11.6%	<b>11<sup>th</sup></b>	21.0%
<b>5<sup>th</sup></b>	15.5%	<b>12<sup>th</sup></b>	19.7%

When asked which state adopted science materials are currently in use, K-8 respondents selected Harcourt *Science* (21.33%), followed by Holt *Science and Technology* (8.31%) and Houghton Mifflin *Discovery Works* (8.03%). All results for these grade levels are summarized in Table 2. Responses given for the high school level are summarized in Appendix D.

**Table 2 — State adopted science materials in use**

Harcourt Science	21.3%
Holt Science and Technology	8.3%
Houghton Mifflin Discovery Works	8.0%
High school:	7.8%
McGraw-Hill <i>Science</i>	6.7%
Prentice Hall <i>Science Explorer</i>	5.5%
Glencoe <i>Science Voyages</i>	0.8%

When asked the same question of state adopted history/social science materials currently in use, very few elementary and middle school teachers selected any titles, as indicated in Table 3. At the high school level, over 21% (21.61%) selected Houghton Mifflin *Social Studies*, followed by McGraw-Hill *Adventures in Time & Place* (10.25%), and Harcourt Brace *Social Science* (9.42%).

**Table 3 — State adopted history/social science materials in use**

Addison-Wesley Longman <i>Why We Remember</i>	0.0%
Kendall/Hunt <i>Social Science 2000</i>	0.0%
HRW <i>Exploring America's Past</i>	0.0%
Kendall/Hunt <i>Ancient World 2000</i>	0.3%
Glencoe/McGraw-Hill <i>American Journey</i>	0.8%
Oxford University Press <i>A History of Us</i>	0.8%
Holt, Rinehart, Winston (HRW) <i>Call to Freedom</i>	1.1%
Prentice Hall <i>The American Nation</i>	2.2%
High school:	4.4%
Harcourt Brace <i>Social Studies</i>	9.4%
McGraw-Hill <i>Adventures in Time &amp; Place</i>	10.3%
Houghton Mifflin <i>Social Studies</i>	21.6%

The average time spent teaching science and history/social science each week using state adopted materials was reported as:

**Table 4 — Average time spent teaching science and history/social science each week using state adopted materials**

Type	Science	History/Social Science
K – 3rd	56 minutes	49 minutes
4th – 5th	85 minutes	82 minutes
6th – 8th	112 minutes	83 minutes
9th – 12th	119 minutes	40 minutes

Over half of the respondents (54.9%) indicated they use supplementary science curriculum materials. Sources include GEMS (e.g., *Convection Currents*), as well as materials collected through attendance at workshops and from the library and Internet. Over half of the

respondents (57.6%) indicated use of supplementary history/social science curriculum materials as well. Sources here include literature, movies, and reference materials for student research projects. The average time spent teaching science and history/social science each week using supplementary materials was reported as:

**Table 5 — Average time spent teaching science and history/social science each week using supplementary curriculum materials**

Type	Science	History/Social Science
K – 3 <sup>rd</sup>	30 minutes	23 minutes
4 <sup>th</sup> – 5 <sup>th</sup>	60 minutes	32 minutes
6 <sup>th</sup> – 8 <sup>th</sup>	44 minutes	41 minutes
9 <sup>th</sup> – 12 <sup>th</sup>	49 minutes	21 minutes

Nearly a combined 80% of respondents preferred printed material in the form of a three-ring binder or bound book for curriculum materials for teachers. Over 75% preferred the same format for student materials. Less than eight percent (7.5%) expressed interest in web-based delivery of materials. All results are summarized in Table 6.

**Table 6 — Preferred Format for Curriculum Materials**

Type	Teacher	Student
3-ring binder	46.0%	57.9%
bound book	33.2%	17.7%
CD-ROM	13.6%	8.3%
DVD	9.7%	7.8%
web-based	7.5%	7.2%
other (specify):	3.3%	7.2%

Features respondents would like to see curriculum materials offer include student handouts (85.0%), lesson plans (80.3%), student readings (71.5%), and resource lists (56.5%). Other recommended features identified in the comments section include large visual charts, artifact samples, reading time before undertaking activities, and completeness of materials (e.g., all necessary supplies, plus suggestions for instruction, management strategies, etc.).

Based on the explanation that one strategy under consideration for the Model Curriculum is the development of a series of alternative teacher's guides that integrate the environmental principles and concepts with instruction using state adopted textbooks and other materials, respondents indicated a preference for grades 4 – 6, although the differences across all grade-group levels is slight.

**Table 7 — Preferred Grade-group Level**

K – 3 <sup>rd</sup>	38.8%
4 <sup>th</sup> – 5 <sup>th</sup>	41.8%
6 <sup>th</sup> – 8 <sup>th</sup>	37.1%
9 <sup>th</sup> – 12 <sup>th</sup>	34.9%

Based on the same explanation, respondents expressed strong interest in seeing such material address science (76.7%), followed by history/social science (46.3%), English/language arts (31.9%), and mathematics (19.1%).

When respondents were asked to rank the likelihood of use of material using a scale from 1 – 4, results show a preference for teacher's guides that address all content standards in a particular grade or discipline, as opposed to only a subset of the content standards. There is also strong preference for materials that are available at no cost.

**Table 8 — Likelihood of Use (ranked from 1-4, 4=high 1=low)**

Address all content standards in a particular grade or discipline	3.3
Only address a subset of the content standards in a particular grade or discipline	2.6
Are made available at no cost	3.5

Respondents were also asked to rank seven criteria that influence a teacher's actual use of curriculum materials using a scale from 1 – 7. Responses varied widely; the same numeric values were applied more than once; and there may have even been reversed ranking in which a score of one was deemed the highest value. The following data must therefore be interpreted cautiously.

**Table 9 — Ranking of Criteria (ranked from 1-7, 7=high 1=low)**

Preparation time and ease of use	5.1
Emphasis on hands-on instruction	4.6
Standards-based instructional plans	4.5
Level of comfort teaching the content	4.4
Availability of professional development	3.6
Availability of in-service support	3.3
Approval by school board/administration	3.3

When asked which incentive would most likely persuade the respondent to pursue EEI-related professional development, over 68% selected a stipend, while nearly 14% selected university credit. Ten percent selected "other," but did not qualify what this meant. Eight percent selected school district credit.

Over 27% identified the school district as the most effective provider of professional development; 25.8% identified the university; over 18.6% selected the county office of education. Respondents offered specific comments regarding the quality of professional development, including not combining grade-groups in the training and having a trainer who focuses on the development of a strong program and actively engages the audience.

Over 36% of respondents indicated a preference for weekday afternoons for participation in professional development; 24.4% indicated the start of summer vacation. Respondents also expressed interest in scheduling professional development during school release time, professional growth days, and other contracted work time.

## Conclusions and Recommendations

The results of this study reinforce the recommendations made by the EEI planning team. Respondents indicated a preference for materials targeted at the 4 – 6 level—the grade-group level the planning team had identified for the first phase of development of Model Curriculum materials. Respondents also indicated strong interest in the development materials for the teaching of science, followed by history/social science and English/language arts. Also, reinforcing what the planning team had already deduced, the data do not support the development of EEI curriculum materials that focus on mathematics.

Results at the K – 8 level indicate that one science textbook was three times more likely to be used than all others. At the same time, it appears virtually no history/social science textbook is currently in use among respondents at these grade levels. At the high school level, three history/social science textbooks are currently in use among respondents, with one at least two times more likely to be used than the others. The planning team will need to take this information, as well as the science instructional materials adoption process, into account when developing the Model Curriculum materials in conjunction with textbook use.

Despite the presence of the Internet, respondents were not enthusiastic about web-based delivery of materials, with less than eight percent expressing interest. This finding is consistent with that noted in the 2002 study that The Acorn Group conducted for the Integrated Waste Management Board in which only six percent expressed interest. Like respondents in the former study, educators report that they are most comfortable receiving printed material in the form of a binder or bound book in which student handouts, lesson plans, and student readings are included. This finding has bearing on the design and financing of the Model Curriculum materials and delivery of professional development and support.

Not surprisingly, respondents are also expressed strong interest in materials that are available at no cost.

Respondents also indicated that they would prefer materials that address all, rather than only a subset of, the content standards in a particular grade or discipline.

When asked to rank seven criteria that influence actual use of curriculum materials, the highest-ranking criterion was preparation time and ease of use, while the lowest ranking criterion was approval by school board or administration. However, these data must be treated cautiously. One respondent noted on the survey form that “approval by the school board” was mandatory, and therefore, not a point of discussion. Further, the respondents may not have followed instructions on the survey form, leading to false ranking. The planning team should consider all seven criteria equally in the development of materials.

Stipends appear to be more of an incentive than credit for the pursuit of EEI-related professional development. Weekday afternoons, followed by the start of summer vacation, are preferred times to participate in professional development. Results are fairly evenly distributed among providers of professional development considered most effective, leaving the EEI planning team with some flexibility. However, it is interesting to note the number and nature of comments associated with this question, all summarized in Appendix D.

Compelling information also came from 19 hand-written comments that respondents volunteered on the survey forms. Several individuals voiced strong support for the EEI; others expressed frustration with what they incorrectly assumed to be another layer of information they are expected to teach despite their already crowded schedule. A marketing and outreach

program to disseminate accurate information about the EEI and the Model Curriculum as widely and quickly as possible is needed. Classroom teachers and administrators need to understand the intent and benefits of the Model Curriculum without drawing incorrect conclusions. This effort, coupled with continued solicitation of input from classroom teachers and administrators, will help ensure success as the Model Curriculum is developed and implemented.

Note: It has been the EEI planning team's experience that it takes considerable time to fully explain to an audience the intent of the legislation, the strategies for implementation, and the potential benefits realized from the EEI approach to teaching the content standards. Despite the planning team's efforts to broadcast the legislation and solicit input among educators throughout the State, one cannot assume that these respondents know anything about the legislation other than the limited information provided in the survey instrument. Their responses, therefore, must be interpreted in this light.

## **Appendix A Research Instrument**



## Appendix B Data Tabulation

NOTE: Some answers total more than 100% due to the respondent failure to comply with instructions.

- Q3. What is your current position?  
[88.1%] classroom teacher [13.6%] other  
[4.7%] department chair [2.8%] administrator
- Q4. If a teacher, what grade level(s)?
- |                       |              |                       |              |                        |              |
|-----------------------|--------------|-----------------------|--------------|------------------------|--------------|
| <b>Preschool</b>      | <b>1.1%</b>  | <b>4<sup>th</sup></b> | <b>11.6%</b> | <b>9<sup>th</sup></b>  | <b>20.5%</b> |
| <b>Kindergarten</b>   | <b>10.0%</b> | <b>5<sup>th</sup></b> | <b>15.5%</b> | <b>10<sup>th</sup></b> | <b>21.3%</b> |
| <b>1<sup>st</sup></b> | <b>14.4%</b> | <b>6<sup>th</sup></b> | <b>13.9%</b> | <b>11<sup>th</sup></b> | <b>21.0%</b> |
| <b>2<sup>nd</sup></b> | <b>14.4%</b> | <b>7<sup>th</sup></b> | <b>11.6%</b> | <b>12<sup>th</sup></b> | <b>19.7%</b> |
| <b>3<sup>rd</sup></b> | <b>13.6%</b> | <b>8<sup>th</sup></b> | <b>10.8%</b> | <b>Other</b>           | <b>1.7%</b>  |
- Q5. If a teacher, what subject(s) do you teach?  
[62.6%] English/language arts [61.8%] science  
[58.7%] mathematics [56.0%] history/social science  
[37.7%] other
- Q6. How many years have you taught?  
[14.9] Years
- Q7. On average, how many students are in your classroom each period?  
[25.5] Students
- Q8. Which, if any, of the following state adopted science materials do you currently use?  
[21.3%] Harcourt Science [8.3%] Holt Science and Technology  
[8.0%] Houghton Mifflin Discovery Works [7.8%] High school  
[6.7%] McGraw-Hill Science [5.5%] Prentice Hall Science Explorer  
[0.8%] Glencoe Science Voyages
- Q9. Which, if any, of the following state adopted history/social science materials do you use?  
[0.0%] Addison-Wesley Longman *Why We Remember*  
[0.0%] Kendall/Hunt *Social Science 2000*  
[0.0%] HRW *Exploring America's Past*  
[0.3%] Kendall/Hunt *Ancient World 2000*  
[0.8%] Glencoe/McGraw-Hill *American Journey*  
[0.8%] Oxford University Press *A History of Us*  
[1.1%] Holt, Rinehart, Winston (HRW) *Call to Freedom*  
[2.2%] Prentice Hall *The American Nation*  
[4.4%] High school  
[9.4%] Harcourt Brace *Social Studies*  
[10.3%] McGraw-Hill *Adventures in Time & Place*  
[21.6%] Houghton Mifflin *Social Studies*
- Q10. Do you currently use any supplemental science instructional materials?

[54.9%] Yes

[45.1%] No

Q12. Do you currently use any supplemental history/social science instructional materials?  
[57.6%] No [42.4%] Yes

Q14. How many minutes each week do you spend teaching science with state adopted materials?  
[118.3] Minutes

Q15. How many minutes each week do you spend teaching history/social science with state adopted materials?  
[78.7] Minutes

Q16. How many minutes each week do you spend teaching science with supplementary materials?  
[61.7] Minutes

Q17. How many minutes each week do you spend teaching history/social science with supplementary materials?  
[48.3] Minutes

Q18. Which format do you prefer for curriculum materials?

Type	Teacher	Student
3-ring binder	46.0%	57.9%
bound book	33.2%	17.7%
CD-ROM	13.6%	8.3%
DVD	9.7%	7.8%
web-based	7.5%	7.2%
other (specify):	3.3%	7.2%

Q19. Which features do you like to see curriculum materials offer?  
[85.0%] student handouts [80.3%] lesson plans [71.5%] student readings  
[56.5%] resource lists [35.2%] other

Q20. If such teacher's guides are developed, which grade-level groups would you like them to address?  
[38.8%] K – 3 [41.8%] 4 – 5  
[37.1%] 6 – 8 [34.9%] 9 - 12

Q21. If such teacher's guides are developed, which subject areas would you like them to address?  
[76.7%] science [46.3%] history/social science  
[31.9%] English/language arts [19.1%] mathematics

Q22. Using a scale from 1 - 4 [1=low - 4=high] indicate the likelihood of your using these teacher's guides if they:

- Address all content standards in a particular grade or discipline?  
[3.3]
- Only address a subset of the content standards in a particular grade or discipline?  
[2.6]
- Are made available at no cost?  
[3.5]

Q23. There are many criteria that influence a teacher's use of curriculum materials. Using a scale from 1 - 7 [1=low - 7=high] rate each of the following in terms of influence:

- [5.1] Preparation time and ease of use
- [4.6] Emphasis on hands-on instruction
- [4.5] Standards-based instructional plans
- [4.4] Level of comfort teaching the content
- [3.6] Availability of professional development
- [3.3] Availability of in-service support
- [3.3] Approval by school board/administration

Q24. With this in mind, which incentive is most likely to persuade you to pursue EEI-related professional development?

- [68.4%] A stipend
- [13.9%] University credit
- [10.8%] Other
- [8.0%] School district credit

Q25. What type of institution do you consider the most effective provider of professional development?

- [27.7%] School district
- [25.8%] University
- [18.6%] County office of education
- [16.9%] Non-profit or other organization
- [13.3%] Other

Q26. When do you prefer to participate in professional development?

- [36.6%] weekday afternoons
- [24.4%] start of summer vacation
- [16.9%] end of summer vacation
- [15.0%] weekends
- [8.0%] off-track breaks in year-round schedules

#### **Average time spent teaching science and history/social science each week using state adopted materials**

<b>Type</b>	<b>Science</b>	<b>History/Social Science</b>
K – 3rd	56 minutes	49 minutes
4th – 5th	85 minutes	82 minutes
6th – 8th	112 minutes	83 minutes
9th – 12th	119 minutes	40 minutes

#### **Average time spent teaching science and history/social science each week using supplementary materials**

<b>Type</b>	<b>Science</b>	<b>History/Social Science</b>
K – 3rd	30 minutes	23 minutes
4th – 5th	60 minutes	32 minutes
6th – 8th	44 minutes	41 minutes
9th – 12th	49 minutes	21 minutes

## **Appendix C**

### **Schools and Locations**

ALBANY MIDDLE SCHOOL	ALBANY
ALBANY MIDDLE SCHOOL	ALBANY
CORNELL	ALBANY
MARK KEPPEL HS	ALHAMBRA
DON JUAN AVILA ELEM	ALISO VIEJO
JONAS SALK ELEM	ANAHEIM
JONAS SALK ELEM	ANAHEIM
RIVERDALE ELEM	ANAHEIM
SAVANNA HS	ANAHEIM
KIMBALL	ANTIOCH
APTOS HS	APTOS
APTOS JR HIGH	APTOS
PAULDING MIDDLE SCHOOL	ARROYO GRANDE
SELBY LANE	ATHERTON
SHAFFER	ATWATER
PINE RIDGE	AUBERRY
FREEDOM MIDDLE	BAKERSFIELD
GENERAL SHAFTER	BAKERSFIELD
THORNER	BAKERSFIELD
BALDWIN PARK ADULT	BALDWIN PARK
BALDWIN PARK ADULT SCHOOL	BALDWIN PARK
CAMERON	BARSTOW
RIO VISTA ELEMENTARY	BAY POINT
PALM ELEM	BEAUMONT
CORONA AVENUE SCHOOL	BELL
BELL GARDEN INTER	BELL GARDENS
CARLMONT HS	BELMONT
BERKELEY HIGH	BERKELEY
WASHINGTON ELEM	BERKELEY
BEVERLY VISTA	BEVERLY HILLS
BONSALL ELEM	BONSALL
RANCHERIA HS	BOONVILLE
BROWLEY HS	BROWLEY
EXCELSIOR MS	BYRON
CALISTOGA ELEMENTARY	CALISTOGA
COAST UNION HIGH SCHOOL	CAMBRIA
EL CAMINO CREEK	CARLSBAD
CANALINO	CARPINTERIA
CASTAIC MIDDLE SCHOOL	CASTAIC
ABC ADULT	CERRITOS
GERMAIN ST ELEM	CHATSWORTH
WALNUT	CHINO
COUNTRY SPRINGS ELEMENTARY	CHINO HILLS
ARLINGTON HEIGHTS	CITRUS HEIGHTS
OAK HILL MIDDLE	CLEARLAKE
MCKINLEY ELEMENTARY	COLTON
DAVIS MS	COMPTON
KELLY ELEMENTARY	COMPTON
CORONA FUNDAMENTAL INTERMEDIATE	CORONA
LINCOLN	CORONA
SANTIAGO HIGH SCHOOL	CORONA
REA ELEM	COSTA MESA
JOHN SWETT HIGH	CROCKETT
PARK AVE.	CUDAHY
KENNEDY MIDDLE	CUPERTINO

MONTE VISTA HS	DANVILLE
O.W. HOLMES JR. HIGH SCH.	DAVIS
PIONEER	DAVIS
TORREY PINES HS	DEL MAR
FREMONT	DELANO
HARMONY	DELHI
ANDERSON ELEMENTARY	DIXON
NORTHVIEW	DUARTE
MAGNOLIA	EL CAJON
MERIDIAN	EL CAJON
GRADE 2	EL CERRITO
EL SOBRANTE	EL SOBRANTE
DIEGUENS	ENCINTAS
RHOADES SCHOOL	ENCINITAS
FARR	ESCONDIDO
ROSE ELEM	ESCONDIDO
EUREKA HS	EUREKA
EUREKA HS	EUREKA
FRESHWATER	EUREKA
VANDON HS	FAIRFIELD
FOLSOM HIGH	FOLSOM
FOLSOM LAKE HS	FOLSOM
GRANT ELEMENTARY	FONTANA
FREMONT UNIFIED SCHOOL DISTRICT	FREMONT
VALLEJO MILL	FREMONT
MIGUEL HIDALGO ELEMENTARY	FRESNO
GALT HIGH SCHOOL	GALT
MOUNT MADANNA HIGH	GILROY
BENJAMIN FRANKLIN	GLENDALE
JOHN MARSHALL ELEMENTARY	GLENDALE
JOHN MUIR ELEMENTARY	GLENDALE
EL CAMINO	GOLETA
KENNEDY HIGH	GRANADA HILLS
PORTER MS	GRANADA HILLS
VAN GOGH ELEM	GRANADA HILLS
GRIDLEY HIGH SCHOOL	GRIDLEY
WILSON HIGH	HACIENDA HEIGHTS
NEWTON MIDDLE	HACIENDA HTS
LEE RICHMOND	HANFORD
HAYWARD 55+	HAYWARD
RUUS PEIXOTO	HAYWARD
ELDRIDGE	HAYWOOD
HERMOSA VALLEY	HERMOSA BEACH
HAWES ELEM	HUNTINGTON BEACH
JOHN R. PETERSON	HUNTINGTON BEACH
MARINA HIGH	HUNTINGTON BEACH
MARINA HIGH	HUNTINGTON BEACH
HUNTINGTON PARK HS	HUNTINGTON PARK
WEST VIEW	IMPERIAL BEACH
LAKESIDE MS	IRVINE
RANCHO MS	IRVINE
28 <sup>TH</sup> STREET SCHOOL	LA
LA CANADA ELEM	LA CANADA
LINCOLN	LA CRESCENTA
LAS POSITAS ELEM	LA HABRA

LA MIRADA HS	LA MIRADA
LA MIRADA HIGH	LA MIRADA
VILLACORTA ELEMENTARY	LA PUENTE
NIGUEL HILLS MIDDLE	LAGUNA NIGUEL
BIMINGHAM HS	LAKE BALBOA
CANYON LAKE MIDDLE SCHOOL	LAKE ELSINORE
TERRA COTTA MIDDLE SCHOOL	LAKE ELSINORE
HUGHES-LAKE ELIZABETH	LAKE HUGHES
KERN VALLEY HS	LAKE ISABELLA
HOLMES	LAKEWOOD
LAKEWOOD HIGH	LAKEWOOD
MAYFAIR HS	LAKEWOOD
NORTHMONT GLEN	LA MESA
ALICANTE AVE.	LAMONT
AMARGOSA CREEK MIDDLE SCHOOL	LANCASTER
LINCOLN ELEM	LANCASTER
PIUTE MS	LANCASTER
TESOVO HIGH SCHOOL	LAS FLORES
LAYTONVILLE HS	LAYTONVILLE
LEMOORE HIGH SCHOOL	LEMOORE
MOFFETT	LENNOX
CEDAR LANE	LINDA
LITTLEROCK HS	LITTLEROCK
LIVINGSTON MS	LIVINGSTON
CABRILLO	LOMPOC
MIGUELITO ELEM	LOMPOC
VANDENBERG HS	LOMPOC VAE B
LOINYO ELEM	LONE PINE
CESAR CHAVEZ ELEMENTARY	LONG BEACH
HUGHES MS	LONG BEACH
PATRICK HENRY	LONG BEACH
SPECIAL ED	LONG BEACH
STEPHENS	LONG BEACH
LOS ALTOS HS	LOS ALTOS
BALDWIN HILLS ELEM	LOS ANGELES
BROOKLYN	LOS ANGELES
CLIFFORD ST	LOS ANGELES
D.W.GRIFFITH MIDDLE SCHOOL	LOS ANGELES
EAGLE ROCK ELEM	LOS ANGELES
HOLLENBECK MIDDLE SCHOOL	LOS ANGELES
INFANT AND PRESCHOOL	LOS ANGELES
LOS ANGELES HIGH	LOS ANGELES
LOS FELIZ ACADEMY	LOS ANGELES
ROSCOMARE ELEMENTRY	LOS ANGELES
WEST ATHENS	LOS ANGELES
WILSON HS	LOS ANGELES
CENTER FOR MARINE STUDIES	LOS ANGELES UNIFIED
LYNWOOD HS	LYNWOOD
ROOSEVELT	LYNWOOD
W. WOODWARD	MANTECA
CEDAR LANE ELEMENTARY	MARYSVILLE
OLIVEHURST	MARYSVILLE
DOW'S PRARIE ELEMENTARY	MCKINLEYVILLE
WEIMAR HILLS	MEADOW VISTA
CALLIE KIRKPATRICK	MENIFEE

HILLVIEW MIDDLE	MENLO PARK
MERCED HIGH SCHOOL	MERCED
MIDDLETOWN HS	MIDDLETOWN
GREEN HILLS	MILLBRAE
RANDALL ELEMENTARY	MILPITAS
BURBANK	MODESTO
CHRYSLER ELEMENTARY	MODESTO
FLORY ACADEMY	MOORPARK
JOAQUIN MORAGA IS	MORAGA
ARMADA ELEMENTARY	MORENO VALLEY
MORENO VALLEY HS	MORENO VALLEY
NORDSTROM	MORGAN HILLS
NAPA VALLEY LANGUAGE ACADEMY	NAPA
SILVERADO MS	NAPA
VALLEY VIEW	NEWHALL
VALLEY VIEW	NEWHALL
ORESTIMBA HS	NEWMAN
CORONA DEL MAR	NEWPORT BEACH
ENSIGN INTERMEDIATE	NEWPORT BEACH
NEWPORT COAST ELEMENTARY	NEWPORT COAST
CAMELLIA AVE	NO. HOLLYWOOD
NORCO HS	NORCO
NORCO HS	NORCO
HIGHLANDS	NORTH HIGHLANDS
PLUMMER ES	NORTH HILLS
DARBY AVE. ELEM	NORTHRIDGE
D. D. JOHNSTON	NORWALK
OAKDALE JR. HIGH	OAKDALE
HAWTHORNE	OAKLAND
LIBBY	OCEANSIDE
OCEANSIDE HIGH	OCEANSIDE
OLIVEHURST ELEM	OLIVEHURST
CHAFFEY COMMUNITY DAY	ONTARIO
COLONY HIGH	ONTARIO
OAKS MIDDLE	ONTARIO
ONTARIO CENTER SCHOOL	ONTARIO
ONTARIO CENTER SCHOOL	ONTARIO
ORANGE HIGH SCHOOL	ORANGE
SANTAGO CHARTER MS	ORANGE
CESAR CHAVEZ	OXNARD
CHAPPEL ISCRAYS HS	OXNARD
KATHERINE FINCHY ELEMENTRY	PALM SPRINGS
KATHERINE FINDIY	PALM SPRINGS
PALMDALE HS	PALMDALE
PALMDALE HS	PALMDALE
OHLONE ELEM	PALO ALTO
ORANGE	PARAMOUNT
LEWIS MIDDLE SCHOOL	PASO ROBLES
BERBARD ELDREDGE	PETALUMA
CASA GRANDE HS	PETALUMA
PHELAN ELEM	PHELAN
NORTH RANCH	PICO RIVERA
PINE GROVE ELEM	PINE GROVE
SIERRA ELEM	PLACERVILLE
SIERRA	PLACERVILLE

DONLON	PLEASANTON
HOPE	PORTERVILLE
MONACHE HS	PORTERVILLE
PROSPECT ED. CENTER PEC	PORTERVILLE
TWIN PEAKS MIDDLE SCHOOL	POWAY
TESORO HIGH	RANCH SANTA MARGARITA
RANCHO BERNARDO HS	RANCHO BERNARDO
RANCHO CUCAMONGA HS	RANCHO CUCAMONGA
RANCHO CUCAMONGA HS	RANCHO CUCAMONGA
METTEER	RED BLUFF
RED BLUFF H.S.	RED BLUFF
ORANGEWOOD HS	REDLANDS
HOOVER ELEMENTARY	REDWOOD CITY
GERALD FITZGERALD ELEMENTRY	RIALTO
KUCEAN	RIALTO
MIRA VISTA	RICHMOND
BOULDER CREEK	REDDING
MURRAY MIDDLE SCHOOL	RIDGECREST
MONROE	RIVERSIDE
PACIFIC AVE	RIVERSIDE
POLY HIGH	RIVERSIDE
SHERMAN INDIAN HIGH SCHOOL	RIVERSIDE
TERRACE ELEM	RIVERSIDE
TOMAS RIVERA ELEM	RIVERSIDE
SIERRA CHRISTIAN ACADEMY	ROCKLIN
RICE	ROSEMEAD
SIERRA GARDENS	ROSEVILLE
BOWLING GREEN	SACRAMENTO
CAL MS	SACRAMENTO
GLENWOOD	SACRAMENTO
JOSEPH BONNHEIM	SACRAMENTO
KENNEDY HS	SACRAMENTO
PONY EXPRESS	SACRAMENTO
ROSEMONT HS	SACRAMENTO
WILL C. WOOD	SACRAMENTO
JANE L. PENA	SACRAMENTO
NATOMAS PARK ELEMENTARY	SACRAMENTO
FRANK PAUL	SALINAS
FREMONT	SALINAS
LOMA VISITA	SALINAS
PRUNEDALE	SALINAS
CARMEL VALLEY MIDDLE	SAN DIEGO
HARDY	SAN DIEGO
KIMBROUGH ELEM	SAN DIEGO
MASON ELEM	SAN DIEGO
MT CARMEL HS	SAN DIEGO
O'FARRP	SAN DIEGO
SEQUOIA ELEM	SAN DIEGO
WEBSTER	SAN DIEGO
WESTHILLS HIGH	SAN DIEGO
HILLCREST ELEMENTARY	SAN FRANCISCO
KROUZIAN ZEKARIAN	SAN FRANCISCO
MIRALOMA	SAN FRANCISCO
SFUSD	SAN FRANCISCO
GOLDEN PLAINS ALT. PROG.	SAN JOAQUIN

GUNDERSON HS	SAN JOSE
MILLBROOK ELEM	SAN JOSE
SANTA TERESA HIGH SCHOOL	SAN JOSE
SILVER CREEK HS	SAN JOSE
WINDMILL SPRINGS	SAN JOSE
DEANZA	SAN JACINTO
BANCROFT	SAN LEANDRO
HILLSIDE	SAN LEANDRO
JAMES MADISON EL.	SAN LEANDRO
JOHN MUIR MIDDLE SCHOOL	SAN LEANDRO
SAN MARCOS MS	SAN MARCOS
HILLSDALE HS	SAN MATEO
TARA HILLS	SAN PABLO
LAUREL DELL	SAN RAFAEL
TERRA LINDA HS	SAN RAFAEL
HIDDEN HILLS	SAN RAMON
SMYTHE	SAN YSIDRO
CENTERVILLE ELEM	SANGER
WASHINGTON ELEM	SANTA ANA
BRACHER ELEMENTARY	SANTA CLARA
BUCHSER MS	SANTA CLARA
SCOTT LANE ELEMENTARY	SANTA CLARA
SHORELINE	SANTA CRUZ
BATTLES	SANTA MARIA
PATHWAYS CHARTER	SANTA ROSA
SCHAEFER ELEMENTARY	SANTA ROSA
WEST HILLS HS	SANTEE
FRANKLIN	SANTA BARBARA
SCOTTS VALLEY HS	SCOTTS VALLEY
SELMA HIGH	SELMA
SHASTA LAKE MS	SHASTA LAKE
HIGH SCHOOL	SO CAL
SOQUEL HS	SOQUEL
LIBERTY BLVD	SOUTH GATE
MONTE VISTA HS	SPRING VALLEY
ESCONDIDO	STANFORD
BEAR CREEK HS	STOCKTON
COMMODORE	STOCKTON
HOOVER ELEMENTARY	STOCKTON
FRANCIS POLYTECHNIC	SUN VALLEY
BISHOP	SUNNYVALE
FREEMONT HIGH SCHOOL	SUNNYVALE
VARGAS	SUNNYVALE
MEADOW VIEW	SUSANVILLE
SEANVILLE SCHOOL DIST	SUSANVILLE
CLOVERLY	TEMPLE CITY
COACHELLA VALLEY HIGH SCHOOL	THERMAL
WEATHERSFIELD	THOUSAND OAKS
NORTH HIGH	TORRANCE
SHERRY HIGH	TORRANCE
TRAVIS EDUCATION CENTER	TRAVIS AIR FORCE BASE
GLENSHIRE	TRUCKEE
INDEPENDANCE HS	TURLOCK
DENNIS EARL	TURLOCK
NOKOMIS ELEM	UKIAH

CABRILLO ELEMENTARY	UPLAND
PADAN	VACAVILLE
BASSETT STREET ELEM	VAN NUYS
MOUND SCHOOL	VENTURA
CROWLEY	VISALIA
VISTA FOCUS ACADEMY	VISTA
RIVER CITY HIGH SCHOOL	W. SACRAMENTO
INDIAN VALLEY	WALNUT CREEK
WALNUT HEIGHTS ELEM	WALNUT CREEK
PALM AVE	WASCO
SOUTH FORK	WELDON
EVERGREEN ELEM	WEST SACRAMENTO
JORDAN ELEM	WHITTER
LINCOLN	WHITTIER
BROAD AVE	WILMINGTON
BROADAVE	WILMINGTON
WINCHESTER ELEM	WINCHESTER
WAGGONER	WINTERS
GIBSON	WOODLAND

## **Appendix D**

### **Narrative Responses**

#### **Question 8**

- Addison Wesley Chemistry
- AGS Science
- Automotive Technology
- Biology Prentice Hall
- Chemistry
- Health Occupations
- Hole's Essentials Of Anatomy And Physiology
- Holt Science And Technology
- IAB Int/Coord Science For 21st Century
- Low Reading Level
- McGraw-Hill Health
- Miller Living In Environment
- Modern Biology
- Perdmon
- The Pinnipeds

#### **Question 9**

- American Government
- Glencoe Series AGS
- Government in America (AP Gov)
- Norton: America, A Narrative History
- Prentice Hall World history Making Connections
- Vaughn World History I & II

#### **Question 11**

- "Convection Currents"
- Through workshops over the years
- From the library & Internet (Too many to list)

#### **Question 12**

- First people to the present & materials from Internet library

#### **Question 13**

- College board course description interaction
- Stories, book, movies
- Topics (for typing practice)

#### **Question 15**

- Integrated in H. Mifflin L.A.

**Question 16**

- Done by "unit, not daily"
- All integrated throughout the day

**Question 18**

- Hands-on experimentation
- No technology to use these in our district (CD-ROM, DVD, web-based)

**Question 19**

- Colorful master, simplicity
- Cont-ideas for differentiation
- Incorporates environmental education to some degree - - I'm delighted
- Matches to state standards
- Spend learning English reading
- Charts (large visuals)
- Artifact samples
- Hours to read before hand
- Work and dovetail with other subjects (ex reading, science, soc. studies)
- Those are quite complete in ensuring teachers can do the activities (hands, management strategies, etc)
- All necessary supplies for possible experiments
- Hands-on kits, soc. Science maps, globe, biographies, civics

**Question 20**

- Oh great another mandate!
- Integrate this into already established areas of lang. arts & math materials
- Why not all?

**Question 22**

- Depends on how good they are!
- If they relate to chemistry and physics. I am interested in developing curricula in chemistry and physics that involve the environment. Please call me if teachers are needed for this purpose.

**Question 23**

- Note that has to happen anyway.
- You left out "Student interest and engagement"
- The curriculum is terribly impacted with the state standards already; I can't imagine introducing more materials at this time!

**Question 24**

- Oh goodie

**Question 25**

- I can't select 1 since I got training workshops from all that were quite relevant & meaningful for my kids & myself

- Lousy job-instruction is key
- Individual presentation
- School setting
- Treat me as a child when presenting
- No combined grades such as K-3. Single grade only meetings
- Not as important, since we have approval, and I cannot take off school hours for in-services
- The presentation rather than where person is from
- To enhance presentation of most important concepts
- Someone who develops good programs w/ sound philosophy and doesn't just re-read what's already in the text

**Question 26**

- What happened to "The Child's Place in the Environment?" It was an excellent curriculum!
- Best is school release time
- Professional growth days
- Anything but weekday afternoons
- I am too, too busy
- Work day-set sub paid by district
- Only will do professional development during contracted work time